Subject: Re: Newbie's question
Posted by Paul Van Delst[1] on Thu, 20 Oct 2005 13:44:44 GMT
View Forum Message <> Reply to Message

ChiChiRuiz@gmail.com wrote:

> Hi there,

>

- > I have a scatter plot which has the shape of a parabola, like $y=x^2$.
- > I want to find the best curve fit to the scatter plot, so I used the
- > function "curvefit" with no weights and with initial guesses (1.0, 2.0)
- > i.e. $y = 1.*x^{(2)}$. So, here's the problem...when I use only the right
- > half of the data points (i.e. x and y values are positive), I get the
- > curvefit returns parameter (0.5, 1.5), which means, the best fit curse
- > is y=.5*x^(1.75). I know the fit should be symmetric, so the same curve
- > SHOULD fit the other half. Now unto the left half side of the data
- > set, curvefit does not work anymore, and here's why, $x^{(1.5)}=x^{(3/2)}$
- > and when x is a negative number, IDL returns "NaN" because it can't
- > take the square root of a negative number, hence the entire procedure
- > will not work. I ended up having to throw away half of my data points,
- > and I'm not very comfortable with that. Any idea how to go around it
- > or suggest another function to do the same thing?

Try Craig Markwardt's MPFIT suite (google will find it). It is a much more robust curve fitter than IDL's CURVEFIT.

cheers.

paulv

--

Paul van Delst CIMSS @ NOAA/NCEP/EMC